

**UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF PENNSYLVANIA**

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PENNENVIRONMENT, INC. and  
THREE RIVERS WATERKEEPER,

Plaintiffs,

v.

BVPV STYRENICS LLC and STYROPEK  
USA, INC.,

Defendants.

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Civil Action No.:

2:23-CV-2067

**COMPLAINT**

**INTRODUCTION**

1. This is a citizen enforcement suit brought by two non-profit environmental organizations, PennEnvironment, Inc. and Three Rivers Waterkeeper (collectively, “Plaintiffs”), to address the unpermitted discharge of millions of tiny plastic pellets into waters, riverbanks, and sediments in and around Raccoon Creek and the Ohio River in northwest Pennsylvania. Plaintiffs bring suit on behalf of their individual members against BVPV Styrenics LLC (“BVPV”), and its parent company, Styropek USA, Inc. (“Styropek”), to redress and prevent this ongoing violation of the federal Clean Water Act (“CWA” or the “Act”).

2. This suit is authorized under Section 505 of the CWA, 33 U.S.C. § 1365, commonly known as the “citizen suit” provision.

3. Since approximately October 2020, Defendant Styropek has owned Defendant BVPV and the expandable polystyrene (“EPS”) manufacturing facility (“Styropek Facility” or “Facility”) located at 400 Frankfort Road in Monaca, PA.

4. Upon information and belief, both Styropek and BVPV participate in the operation of the Facility.

5. The Styropek Facility manufactures EPS plastic resins in the form of beads, which are often referred to as “nurdles.” The nurdles are small, rigid spheres that measure up to 3 millimeters in diameter. Styropek’s customers eventually expand the nurdles into a moldable foam, colloquially referred to as “Styrofoam,” which is used in products such as coffee cups, coolers, and packing materials.

6. Defendants discharge wastewater from the Facility into the Ohio River and into Raccoon Creek, a tributary to the Ohio River. Defendants also discharge stormwater from the Facility into Raccoon Creek.

7. Dischargers of industrial wastewater and stormwater, like Defendants, must comply with permits issued under the National Pollutant Discharge Elimination System (“NPDES”), a federal program established in Section 402 of the Act, 33 U.S.C. § 1342. In Pennsylvania, the NPDES program is administered by the Pennsylvania Department of Environmental Protection (“Pennsylvania DEP”), subject to the oversight and ultimate authority of the U.S. Environmental Protection Agency (“USEPA”).

8. An NPDES discharge permit, which is required by federal law to meet certain specified criteria, identifies allowable pollutants, contains limits on the discharge of those pollutants, and often imposes other requirements intended to reduce the impacts of a facility’s discharge on the quality of receiving waters.

9. The discharge of any pollutant that is not specifically authorized by an NPDES permit is prohibited under Section 301(a) of the CWA, 33 U.S.C. § 1311(a).

10. The discharge of any pollutant in ways that violate an NPDES permit requirement is prohibited by Section 301(a) of the CWA, 33 U.S.C. § 1311(a).

11. BVPV has been issued an NPDES permit (No. PA0006254) for the Styropek Facility (“Styropek Permit” or “Permit”).

12. Wastewater and stormwater discharged by the Styropek Facility into Raccoon Creek and the Ohio River routinely contains small plastic nurdles. These nurdles are “pollutants” within the meaning of Section 502(6) of the CWA, 33 U.S.C. § 1362(6), because they are discarded and are chemical, solid, and industrial wastes. The Permit does not authorize the discharge of nurdles in the Facility’s wastewater or stormwater, and Defendants have thereby violated, and continue to violate, the CWA prohibition against discharging pollutants that are not specifically authorized by the Permit.

13. The routine, unpermitted discharge of nurdles from the Styropek Facility has also resulted in, and will continue to result in, violations of two requirements in the Permit that are intended to protect Raccoon Creek and the Ohio River. Each violation of these NPDES permit requirements is a violation of the CWA.

14. Defendants will continue to violate the CWA after the date this Complaint is filed.

15. Plaintiffs intend this action to encompass both pre- and post-Complaint violations of the types alleged herein.

16. Plaintiffs and their individual members place a high value on the health and quality of Raccoon Creek and its surroundings and on the health and quality of the Ohio River. They are concerned about the impacts of the nurdles discharged from the Styropek Facility on the health and safety of the creek, the river, and the animal and plant life that live on or in these waterways and their surroundings. Plaintiffs’ members’ use and enjoyment of Raccoon Creek and the Ohio River are adversely affected by the CWA violations described herein.

17. Neither the federal government nor the Commonwealth of Pennsylvania has taken action sufficient to prevent Styropek and BVPV from violating the Act in the past, or to prevent future violations.

### **CITIZEN ENFORCEMENT UNDER THE CWA**

18. The objective of the CWA “is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). The CWA prohibits the discharge of any pollutant from a point source into navigable waters except as authorized by a NPDES permit applicable to that point source. 33 U.S.C. §§ 1311(a) and 1342.

19. The CWA authorizes citizens who are affected by such violations to commence an enforcement action in federal court against any “person,” including partnerships and corporations, alleged to be in violation of “an effluent standard or limitation.” 33 U.S.C. § 1365(a). By definition, a violation of an “effluent standard or limitation” includes (a) an unlawful act under 33 U.S.C § 1311(a) and (b) a violation of any condition or requirement of an NPDES permit. 33 U.S.C. § 1365(f).

20. The CWA authorizes the plaintiffs in such citizen enforcement suits to seek injunctive relief, civil penalties payable to the United States, and their costs of litigation. 33 U.S.C § 1365(a) & (d).

21. To facilitate citizen oversight of water pollution and to encourage the filing of citizen enforcement suits, the CWA requires dischargers to monitor their pollution discharges and makes the resulting discharge monitoring data available to the public. 33 U.S.C. § 1318.

### **PARTIES**

#### **PennEnvironment**

22. PennEnvironment, Inc. (“PennEnvironment”) is a non-profit Pennsylvania corporation with approximately 7,000 members.

23. PennEnvironment is a “person” within the meaning of 33 U.S.C. § 1362(5), which defines “person” under the CWA to include “corporation.”

24. PennEnvironment advocates for clean air, clean water, and the preservation of Pennsylvania’s natural resources. PennEnvironment’s advocacy includes efforts to protect and preserve the Ohio River watershed.

25. Among other activities in pursuit of these goals, PennEnvironment researches and distributes analytical reports on environmental issues, advocates before legislative and administrative bodies, conducts public education and membership recruitment campaigns (door to door, over the phone, via social media, and by direct mail), and pursues public interest litigation on behalf of its members.

26. PennEnvironment has members who live, work, or recreate in, on, or near Raccoon Creek and the Ohio River, in close proximity to the Facility.

27. PennEnvironment brings this suit on behalf of its members who are adversely affected by the unpermitted discharge of nurdles from the Styropek Facility into Raccoon Creek and the Ohio River. They are reasonably concerned that the CWA violations described herein are harming fish and other aquatic life, and this lessens their enjoyment of both Raccoon Creek and the Ohio River. Some of these members use these waterbodies less than they otherwise would because of these violations.

### **Three Rivers Waterkeeper**

28. Three Rivers Waterkeeper is a non-profit Pennsylvania corporation with approximately 600 members, including 150 active volunteers.

29. Three Rivers Waterkeeper is a “person” within the meaning of 33 U.S.C. § 1362(5), which defines “person” under the CWA to include “corporation.”

30. Three Rivers Waterkeeper advocates for drinkable, fishable, swimmable water in the Monongahela, Allegheny, and Ohio Rivers, as well as their respective watersheds.

31. In pursuit of its organizational goals, Three Rivers Waterkeeper staff and members patrol and monitor the Ohio River and its tributaries for pollution and use advanced water-sampling technologies to collect baseline water quality data and to conduct water quality analyses. Through outreach programs, the organization educates community members about watersheds, clean water laws, and water quality issues, and trains community members to spot and report pollution.

32. Three Rivers Waterkeeper has members who live, work, or recreate in, on, or near Raccoon Creek and the Ohio River, in close proximity to the Facility.

33. Three Rivers Waterkeeper brings this suit on behalf of its members who are adversely affected by the unpermitted discharge of nurdles from the Styropek Facility into Raccoon Creek and the Ohio River. They are reasonably concerned that the CWA violations described herein are harming fish and other aquatic life, and this lessens their enjoyment of both Raccoon Creek and the Ohio River. Some of these members use these waterbodies less frequently than they otherwise would because of these violations.

**BVPV Styrenics LLC and Styropek USA, Inc.**

34. BVPV is a limited liability company formed in Delaware on July 15, 2020.

35. BVPV is a “person” within the meaning of 33 U.S.C. § 1362(5), which defines “person” under the CWA to include “partnership” and “corporation.”

36. BVPV manufactures EPS nurdles at the Facility.

37. BVPV operates the Facility.

38. BVPV owns the Facility.

39. For at least 20 years prior to the formation of BVPV, NOVA Chemicals, Inc. (“NOVA Chemicals”) operated and owned the Facility.

40. NOVA Chemicals formed BVPV as a subsidiary to facilitate the sale of its EPS business. NOVA Chemicals transferred ownership of the Styropek Facility, along with all other assets associated with its EPS business, to BVPV upon BVPV’s formation in July 2020.

41. The Foreign Registration Statement filed by BVPV with the Pennsylvania Department of State on August 7, 2020, shows BVPV shared NOVA Chemicals’ principal office (1555 Coraopolis Heights Road, Moon Township, Pennsylvania) and general counsel (Byron C. Romain).

42. Styropek is a corporation incorporated in Delaware and with its principal place of business in Houston, Texas.

43. Styropek is a “person” within the meaning of 33 U.S.C. § 1362(5), which defines “person” under the CWA to include “corporation.”

44. On October 30, 2020, Styropek acquired a 100% interest in BVPV (including the Styropek Facility) from NOVA Chemicals.

45. Styropek also operates the Facility. Styropek employees hold supervisory roles at the Facility and communicate with third parties, including Pennsylvania DEP, regarding environmental compliance at the Facility. Styropek publishes technical data sheets for all products manufactured at the Facility, provides instructions for product storage, handling, production, and recycling to customers, and makes Styropek staff available to answer questions regarding the same.

46. Styropek owns the Facility through its ownership of BVPV.

47. Along with its foreign affiliates, Styropek describes itself as the “North America leader in the EPS (Expandable Polystyrene) industry and the largest EPS producer in the American Continent.”<sup>1</sup>

48. Styropek is part of the Alpek Group, which identifies itself as “the largest petrochemical company in America.” In 2022, Alpek reported \$10.555 billion in total revenue, including \$2.321 billion from its Plastics & Chemicals segment.<sup>2</sup> It operates 35 plants in nine countries, including EPS plants in the United States, Mexico, Argentina, Brazil, and Chile.

### **JURISDICTION, VENUE, AND NOTICE**

49. This Court has subject matter jurisdiction over this action pursuant to 33 U.S.C. § 1365(a)(1) (the CWA citizen suit provision) and 28 U.S.C. § 1331.

50. Venue lies in this District under 33 U.S.C. § 1365(a)(1) because the Facility is located within this District.

51. Pursuant to 28 U.S.C. § 2201(a), this Court may issue a declaratory judgment finding that Defendants Styropek and BVPV violated the Permit and the CWA, and determining the number of days of violations Defendants have committed.

52. On October 3, 2023, counsel for PennEnvironment and Three Rivers Waterkeeper mailed a letter (the “Notice Letter,” a copy of which is attached as **Exhibit 1** and is incorporated by reference herein) by certified mail, return receipt requested, to the following, each of whom received the Notice Letter:

- a. The Manufacturing Leader of BVPV Styrenics LLC at the Facility, Tim Ford. A copy of the return receipt for Mr. Ford is attached as part of **Exhibit 2**.

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<sup>1</sup> <https://styropek.com>, accessed on November 30, 2023.

<sup>2</sup> <https://www.alpek.com/wp-content/uploads/2023/03/Alpek-Annual-Report-2022.pdf>, accessed on November 30, 2023.



- b. The President of Styropek USA, Inc., David Berkowitz. A copy of the return receipt for Mr. Berkowitz is attached as part of **Exhibit 2**.
  - c. CT Corporation System, the registered agent for BVPV Styrenics LLC. A copy of the return receipt for CT Corporation System is attached as part of **Exhibit 2**.
  - d. CT Corporation System, the registered agent for Styropek USA, Inc. A copy of the return receipt for CT Corporation System is attached as part of **Exhibit 2**.
  - e. The Administrator of the USEPA, Michael S. Regan. A copy of the return receipt for the Administrator is attached as part of **Exhibit 2**.
  - f. The Regional Administrator for Region 3 of the USEPA, Adam Ortiz. A copy of the U.S. Postal Service confirmation of delivery to the Regional Administrator is attached as part of **Exhibit 2**.
  - g. The Secretary of the Pennsylvania DEP, Rich Negrin. A copy of the return receipt for the Secretary is attached as part of **Exhibit 2**.
45. The Notice Letter satisfies the CWA's pre-suit notice requirements, as set forth in 33 U.S.C. § 1365(b)(1)(A) and 40 C.F.R. § 135.3.
46. PennEnvironment and Three Rivers Waterkeeper filed this Complaint more than 60 days after the mailing of the Notice Letter, as required by 33 U.S.C. § 1365(b)(1)(A). For the purpose of the Act's 60-day notice requirement, the Notice Letter was served on October 3, 2023, the date on which it was sent via certified mail, return receipt requested. 40 C.F.R. § 135.2(c).
47. PennEnvironment and Three Rivers Waterkeeper will serve a copy of this Complaint on the U.S. Attorney General and the Administrator of the USEPA, pursuant to 33 U.S.C. § 1365(c)(3).
48. As of the time of filing of this Complaint, neither USEPA nor Pennsylvania DEP has commenced or is diligently prosecuting a civil or criminal action against Styropek and/or

BVPV in a court of the United States or a state to require compliance with any of the CWA provisions or NPDES permit provisions Plaintiffs allege are being violated at the Facility.

49. As of the date of service of the Notice Letter, neither USEPA nor Pennsylvania DEP had begun an administrative action to assess a penalty against Styropek and/or BVPV for any of the violations set forth in the Notice Letter.

### **FACTUAL BACKGROUND**

#### **The Facility**

50. The Facility is located at 400 Frankfort Road in Monaca, PA.

51. The Facility sits at the confluence of Raccoon Creek and the Ohio River. As depicted in a satellite image from the Facility's NPDES permit renewal Fact Sheet, Raccoon Creek abuts the eastern edge of the property and the Ohio River abuts the northwestern edge. The Facility itself is labeled "NOVA Chemicals" in the satellite image.



52. Operations at the Facility include the manufacture of EPS and other specialty plastic resins from styrene monomer and other raw materials. The plastic resins manufactured at the Facility take the form of small beads (nurdles).

53. The plastic resin nurdles manufactured at the Facility are intended for later processing at other facilities that will subject them to a molding process during which the nurdles expand to up to 50 times their original size. When expanded, the nurdles are composed of 95% to 98% air and 2% to 5% polystyrene.

54. The Facility has an annual production capacity of 123,000 tons of EPS nurdles.

55. According to Technical Data Sheets published by Styropek and made available on its website, the Facility manufactures more than ten distinct EPS products. Each EPS product is a variety of plastic resin, in the form of a nurdle, with specific properties that make it suitable for conversion by Styropek customers into certain types of end products, such as food packaging (e.g., take-out containers, ice-cream containers, labeled and printed cups, noodle bowls), shipping materials (e.g., protective packaging, food boxes, fish boxes), or construction materials (e.g., concrete forms, block insulation, sheathing). The sizes of the EPS nurdles manufactured at the Facility vary across product lines, ranging from approximately 0.3 millimeters (“mm”) in diameter to 2.5 mm in diameter.

56. The Facility also has an annual production capacity of 36,000 tons of “ARCEL” nurdles. ARCEL is the trademarked name for a specialty type of EPS copolymer. Styropek advertisements tout its use in protective packaging for high-end products like electronics.

57. According to Technical Data Sheets published by Styropek and made available on its website, the Facility manufactures six distinct ARCEL products. The ARCEL products

manufactured at the Facility are sold as nurdles ranging in size from 0.7 mm in diameter to 2.5 mm in diameter. They are white or “natural” in color.

58. The Facility discharges treated process wastewaters generated from organic chemical manufacturing (i.e., production of EPS nurdles and ARCEL nurdles), non-contact cooling water, treated sanitary wastewaters, stormwater, and excess raw water from the Facility’s cooling water intake structure. These discharges flow into Raccoon Creek and the Ohio River through Outfalls 001, 002, 020, 021, and 025. Additional outfalls discharge potable water and river water used to clean intake screens.

59. Process wastewater generated from the Facility’s organic chemical manufacturing (i.e., production of EPS nurdles and ARCEL nurdles) is combined with treated sanitary wastewater. It then undergoes treatment at the Facility’s wastewater treatment plant to remove certain pollutants before it is discharged into Raccoon Creek through Outfall 002.

60. When operating as designed, the wastewater treatment plant treats the process wastewater using carbon adsorption (for certain production lines) and lime addition before the wastewater is directed to a mix pit. There, a cationic coagulant and an anionic polymer are added. The wastewater is then treated at a clarifier, sedimentation basin, aeration lagoon, and quiescent lagoon. Finally, the wastewater receives an anti-foam addition and passes through a step aerator before it is discharged from Outfall 002.

61. Outfall 002 is an underwater outfall located along the bed of Raccoon Creek. It discharges wastewater below the surface of Raccoon Creek approximately six feet from shore.

62. Outfall 002 has an anticipated average flow rate of 1.543 million gallons per day.

63. Outfall 002 is a “point source” as defined in 33 U.S.C. § 1362(14).

64. Stormwater runoff from the Facility is discharged into Raccoon Creek through three permitted outfalls, numbered 020, 021, and 025.

65. Outfall 020 discharges stormwater drainage from 11 acres of parking and administration areas. Outfall 021 and Outfall 025 discharge stormwater drainage from a 1-acre portion and a 2-acre portion of the manufacturing plant, respectively. Each of these outfalls discharges into Raccoon Creek upstream of Outfall 002, at the locations depicted in the satellite image in paragraph 51, above.

66. Outfall 020, Outfall 021, and Outfall 025 are all “point sources” as defined in 33 U.S.C. § 1362(14).

67. The wastewater discharged into Raccoon Creek and the Ohio River is also known as the Facility’s “effluent.”

#### **The Facility’s NPDES Permit Limits**

68. Once issued, NPDES permits generally are effective for five years. They may be modified during the five-year term and must be re-issued upon expiration.

69. The current version of the Styropek Permit (No. PA0006254-3) was issued on July 16, 2019, became effective on August 1, 2019, and was most recently modified on July 30, 2021. A copy is attached as **Exhibit 3**.

70. The Styropek Permit expires on July 31, 2024.

71. The previous version of Styropek Permit was issued on December 27, 2001, and went into effect on February 1, 2002 (“2002 Permit”). Through an administrative extension from Pennsylvania DEP, the 2002 Permit remained in effect until it was superseded by the current Styropek Permit on August 1, 2019.

72. The current Styropek Permit and the 2002 Permit (and all amended versions thereof) govern wastewater and stormwater discharges from the Facility to Raccoon Creek and the Ohio River during the time period covered by this lawsuit.

73. The current Styropek Permit and the 2002 Permit (and all amended versions thereof) state in Part B.II.A and Part B.2.a, respectively, “Any person violating Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act or any permit condition or limitation implementing such sections in a permit issued under Section 402 of the Act is subject to civil, administrative and/or criminal penalties as set forth in 40 CFR 122.41(a)(2).”

74. The “Additional Requirements” section of the current Styropek Permit (and all amended versions thereof) prohibits the Styropek Facility from discharging the following:

- “floating solids, scum, sheen or substances that result in observed deposits in the receiving water,” at Section A(1); and
- “substances in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life,” at Section A(3).

#### **Discovery and Documentation of Nurdle Discharges from the Facility**

##### **Discovery and Documentation by Environmental Groups**

75. As part of Three Rivers Waterkeeper’s efforts to quantify plastic pollution in the region, in February 2022 the group joined with Mountain Watershed Association, another non-profit environmental group, to conduct monthly physical surveys, or “nurdle patrols,” of the Ohio River.

76. The nurdle patrols are conducted using a skiff, from which staff collect samples of floating debris from the water’s surface using a “manta trawl” that incorporates a 300-micron net. During patrols, the groups also gather photographic evidence and collect soil and sediment samples. Evan Clark, who holds the position of Waterkeeper at Three Rivers Waterkeeper, leads the patrols, often assisted by staff and members of the groups.

77. The monthly nurdle patrols initially focused on a segment of the Ohio River flowing past the Shell Polymers Plant, an “ethane cracker” facility located on a sprawling 384-acre tract of riverside property. The facility manufactures polyethylene nurdles that are used to create a large variety of plastic products. The first nurdle patrols sought to gather baseline data on nurdle concentrations in the Ohio River before the new Shell Polymers Plant became operational.

78. The Styropek Facility is immediately downstream of the Shell Polymers Plant along the Ohio River.

79. During a patrol on September 6, 2022, staff from Three Rivers Waterkeeper and Mountain Watershed Association detected particularly small nurdles near the mouth of Raccoon Creek. During subsequent patrols on September 20 and October 3, 2022, the groups found these uniquely sized nurdles in increasing concentrations up Raccoon Creek, including on the water’s surface and on shoreline vegetation.

80. On October 12, 2022, staff from the two groups observed nurdles drifting in Raccoon Creek in the immediate vicinity of Outfall 002. By positioning the skiff immediately above Outfall 002, they confirmed that nurdles were actively emerging from the underwater outfall and floating to the surface of Raccoon Creek. Similar nurdles were observed on the water’s surface and coating shoreline vegetation.

81. On ten subsequent monthly nurdle patrols conducted from October 2022 through August 2023, staff from the two groups visited Raccoon Creek in the immediate vicinity of Outfall 002. On all but one of these patrols (December 6, 2022), they detected nurdles in the water in the immediate vicinity of Outfall 002. A summary of findings and samples from these patrols is set forth in Table 1 to the Notice Letter (**Exhibit 1**).

82. Staff from Three Rivers Waterkeeper and Mountain Watershed Association have conducted three additional nurdle patrols that are not summarized in the Notice Letter sent on



October 3, 2023. On each of those patrols – conducted on September 6, October 4, and November 3, 2023 – they detected nurdles in the water in the immediate vicinity of Outfall 002.

83. Nurdles released from the Facility persistently accumulate at various locations on the surface of Raccoon Creek and frequently collect on aquatic vegetation in the creek and along the shore. The groups have also found them in Raccoon Creek sediments. Photographs depicting nurdle accumulation on vegetation near Outfall 002 are attached as **Exhibit 4**.

#### **Reports Made to Pennsylvania DEP and Styropek**

84. In September 2022, Three Rivers Waterkeeper filed a report with Pennsylvania DEP describing its discovery of nurdles downstream of the Shell Polymers Plant.

85. In October 2022, Three Rivers Waterkeeper submitted an oral complaint to Pennsylvania DEP identifying the Styropek Facility as the likely source of the nurdles.

86. In October 2022, Three Rivers Waterkeeper staff brought an officer from the Pennsylvania Fishing & Boat Commission to Raccoon Creek to view nurdle discharges from Outfall 002.

87. On November 14, 2022, Heather Hulton Van Tassel, Executive Director of Three Rivers Waterkeeper, notified Styropek that the group had found “small plastics coming out of your outfall #2 along Raccoon Creek in Pennsylvania” and that “[p]ollution incidents have been occurring since September and continue.” She disclosed that Three Rivers Waterkeeper had submitted complaints to Pennsylvania DEP, and asked Styropek to investigate and end the nurdle releases.

88. On December 1, 2022, Styropek responded, in part, that “[o]ur sampling and testing since September have indicated that our discharges from this Outfall remain compliant with our permit.”



### **Documentation by Pennsylvania DEP**

89. On December 13, 2022, Pennsylvania DEP personnel conducted a boat survey of several locations at the Styropek Facility and Raccoon Creek. According to a Pennsylvania DEP General Inspection Report issued the following week (see below), Pennsylvania DEP personnel found nurdles in Raccoon Creek and on the bank of Raccoon Creek in the vicinity of Outfall 002. They also found nurdles in the vicinity of stormwater Outfall 025, including “throughout the soil” in an excavated area.

90. On December 21, 2022, Pennsylvania DEP conducted a general inspection of the Facility. Nurdles were again identified near Outfalls 002 and 025. Fugitive nurdles were found in other locations throughout the Facility, including along the bank of the aeration lagoon and in neighboring cattail vegetation, along the banks of the settling basin, and on paved areas. A copy of the December 2022 Pennsylvania DEP General Inspection Report (with photographs) is attached as **Exhibit 5**.

91. On December 23, 2022, Pennsylvania DEP issued a Notice of Violation to BVPV Styrenics regarding violations found during the general inspection on December 21, 2023. Violations included “[d]ischarge of floating materials, scum, sheen, foam, oil, grease, or substances that produced an observable change or resulted in deposits in receiving waters.”

92. The Notice of Violation was not the commencement of an enforcement action, and no enforcement action has since been initiated for the violations described in the Notice of Violation or for any other CWA violations at the Facility.

93. On January 17, 2023, Pennsylvania DEP conducted another general inspection of the Facility. Nurdles were again identified near Outfall 002. Nurdles were also “visible in the soil” at stormwater Outfalls 021 and 025. Additional nurdles visible on the road and gravel areas of Facility grounds had been marked by Styropek staff with an orange traffic cone for eventual

cleanup. A copy of the January 2023 Pennsylvania DEP General Inspection Report (with photographs) is attached as **Exhibit 6**.

### **Documentation by Styropek**

94. In a letter to Pennsylvania DEP on December 16, 2022, Styropek disclosed that it had retained an environmental consultant to conduct a site visit on December 14 and 15, and that the company “identified the presence of plastic beads along a portion of Raccoon Creek, consistent with PADEP and Three Rivers Waterkeeper observations.” The company further stated that “[s]ome of the plastic beads observed appear to be consistent with the size and nature of the material we manufacture and process.”

95. In an email to Three Rivers Waterkeeper on January 6, 2022, Styropek corrected its previous statement (described in paragraph 88, above) that it was not discharging plastic beads into Raccoon Creek. It confirmed that Pennsylvania DEP “found that plastic beads are present in Raccoon Creek” during its December inspection. Styropek further stated, “[a]round the same time, Styropek conducted routine (semi-annual) sampling of stormwater effluent (discharged via a different outfall than #002), which indicated the presence of plastic beads.”

96. Following receipt of the December 2022 Notice of Violation, Styropek has submitted three quarterly progress reports to Pennsylvania DEP acknowledging its need to stop unpermitted nurdle discharges from the Facility (which Styropek refers to as “alleged discharge violations”) via Outfall 002 and its stormwater Outfalls 020, 021, and 025.

### **THE POLLUTANTS DISCHARGED BY DEFENDANTS ARE HARMFUL**

97. Plastic pollution is an international problem. Each year, billions or even trillions of tiny, lightweight nurdles like those manufactured at the Styropek Facility make their way into aquatic environments through drains and watercourses. A 2016 scoping study estimated that

each year up to 53 billion nurdles are released into the environment in the United Kingdom alone.<sup>3</sup>

98. Even if composed of purportedly non-toxic materials, nurdles act as “toxic sponges,” attracting hydrophobic chemical toxins and transporting them throughout aquatic environments.<sup>4</sup>

99. Nurdles discharged by the Styropek Facility are similar in size, shape, and color to fish eggs and other foundational elements of the food chain in Raccoon Creek and the Ohio River. Hundreds of fish species are known to ingest such plastics in marine settings.<sup>5</sup>

100. The nurdles manufactured at the Styropek Facility meet the definition of “microplastics” because they are plastic pieces that are less than 5 mm in length.

101. Exposure to microplastics causes a variety of health issues in fish, including tissue damage, oxidative stress, and neurotoxicity, and cause fish to suffer growth retardation and behavioral abnormalities.<sup>6</sup>

102. Microplastics inadvertently ingested by fish can enter the food chain of humans and other animals.<sup>7</sup>

103. The segment of the Ohio River adjacent to the Styropek Facility has been classified by the Commonwealth of Pennsylvania as an impaired waterway pursuant to section

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<sup>3</sup> See, e.g., FIDRA, Study to quantify plastic pellet loss in the UK (Report Briefing) ([https://www.nurdlehunt.org.uk/images/Leaflets/Report\\_briefing.pdf](https://www.nurdlehunt.org.uk/images/Leaflets/Report_briefing.pdf))

<sup>4</sup> Mato, et al. (2000). Resin Pellets as a Transport Medium for Toxic Chemicals in the Environment, *Environmental Science & Technology* 35(2), 318-324. (<https://pubs.acs.org/doi/abs/10.1021/es0010498>)

<sup>5</sup> Savoca, et al. (2021). Plastic ingestion by marine fish is widespread and increasing. *Global Change Biology*, 27(10), 2188-2199. (<https://onlinelibrary.wiley.com/doi/10.1111/gcb.15533>)

<sup>6</sup> Bhuyan, Simul (2022). Effects of Microplastics on Fish and in Human Health, *Frontiers in Environmental Science*, 2022(10). (<https://www.frontiersin.org/articles/10.3389/fenvs.2022.827289>)

<sup>7</sup> United Nations Environment Programme (2018). Single-Use Plastics: A Roadmap for Sustainability (Rev. ed., Chapter 2, p. 14) ([unep.org/resources/report/single-use-plastics-roadmap-sustainability](https://unep.org/resources/report/single-use-plastics-roadmap-sustainability))

304(l) of the CWA, 33 U.S.C. § 1314(l). It has a use impairment for fish consumption due to PCBs, chlordane, and dioxins. Although the Facility does not discharge these pollutants, they may be adsorbed onto the surface of the nurdles discharged by the Facility. And the nurdles can be mistaken for food by fish and pose health risks to those fish if ingested. Any discharge of pollutants that compounds an existing impairment of the Ohio River is a matter of concern and contributes to the water quality degradation of the Ohio River.

### **DEFENDANTS' VIOLATIONS OF THE CLEAN WATER ACT**

#### **COUNT I:**

#### **Unpermitted Pollutant Discharges from Outfall 002**

104. Paragraphs 1 through 103 are re-alleged and incorporated by reference herein.

105. The addition of a pollutant from a point source to a water of the United States is prohibited under Section 301(a) of the CWA, 33 U.S.C. § 1311(a), unless it is specifically authorized by an NPDES permit.

106. Every nurdle that is manufactured at the Facility and discharged in the effluent of the Facility is a pollutant under Section 502(6) of the CWA, 33 U.S.C. § 1362(6). Such nurdles qualify as pollutants because they are discarded by Styropek with its effluent, and are thus “solid waste, ... chemical wastes, ... and industrial ... waste discharged into water.” *Id.*

107. Defendants add nurdles to Raccoon Creek on a regular basis through Outfall 002, and some of these nurdles make their way downstream to the Ohio River. Both Raccoon Creek and the Ohio River are waters of the United States within the meaning of the CWA.

108. The Styropek Permit does not authorize the Facility to discharge nurdles from Outfall 002. Defendants have never disclosed to the Pennsylvania DEP, as part of a permit application or as part of a permit renewal, that the Facility discharges nurdles or seeks authorization to discharge nurdles from Outfall 002.

109. Each discharge of a nurdle from the Styropek Facility through Outfall 002 is a violation of the CWA.

110. On each day that a nurdle is discharged from the Facility through Outfall 002, Defendants commit one day of violation of the CWA.

111. The monthly nurdle patrols conducted by Three Rivers Waterkeeper on the portion of Raccoon Creek adjacent to Outfall 002 beginning in September 2022 establish that the Styropek Facility routinely discharges significant quantities of nurdles through Outfall 002 into Raccoon Creek.

112. Three Rivers Waterkeeper staff have observed evidence of nurdle discharges from Outfall 002 during 12 of the 13 patrols conducted to date. Such nurdle patrols last less than half an hour, covering less than 5% of the 24 hours per day that the Facility discharges pollutants into Raccoon Creek through Outfall 002.

113. Every inspection of the Facility conducted by Pennsylvania DEP since it first received complaints of nurdle discharges has confirmed that nurdles were present in Raccoon Creek near Outfall 002.

114. An environmental consultant retained by Styropek similarly confirmed that nurdles were present in Raccoon Creek near Outfall 002 during its initial site visit, and Styropek staff have subsequently confirmed that nurdles are discharged from Outfall 002 into Raccoon Creek.

115. All available evidence indicates that nurdles are discharged from Outfall 002 into Raccoon Creek on a daily basis. Plaintiffs therefore allege that during the period from October 3, 2018 (the beginning of the statute of limitation period for this case) through the present, Defendants violated the CWA's prohibition against unpermitted discharges of pollutants from Outfall 002 on each day that the Facility operated.

116. The violations are ongoing. Plaintiffs are unaware of any change to operations or treatment technology at the Facility sufficient to enable the Facility to stop violating the CWA prohibition against the unpermitted discharge of nurdles from Outfall 002. This action addresses all such violations occurring after those described in the Notice Letter and after the filing of this Complaint.

**COUNT II:**  
**Unpermitted Pollutant Discharges from Outfalls 020, 021, and 025**

117. Paragraphs 1 through 116 are re-alleged and incorporated by reference herein.

118. The Styropek Permit authorizes the Facility to discharge variable amounts of stormwater into Raccoon Creek through stormwater outfalls designated Outfall 020, Outfall 021, and Outfall 025.

119. Defendants add nurdles to Raccoon Creek through Outfalls 020, 021, and 025, and some of these nurdles make their way downstream to the Ohio River.

120. The Styropek Permit does not authorize the Facility to discharge nurdles through Outfall 020, Outfall 021, or Outfall 025. Defendants have never disclosed to the Pennsylvania DEP, as part of a permit application or as part of a permit renewal, that the Facility discharges nurdles or seeks authorization to discharge nurdles from Outfall 020, Outfall 021, or Outfall 025.

121. Each discharge of nurdles from the Styropek Facility through Outfall 020, Outfall 021, or Outfall 025 is a separate violation of the CWA.

122. On each day that a nurdle is discharged from the Facility through Outfall 020, Outfall 021, or Outfall 025, Defendants commit one day of violation under the CWA for each outfall from which a nurdle is discharged, for as many as three days of violation per calendar day among these outfalls.

123. Pennsylvania DEP Inspection Reports from December 2022 and January 2023 document the presence of loose nurdles at numerous locations at the Facility from which stormwater flows to one of the three stormwater outfalls, including on pavement and “throughout the soil” near stormwater Outfall 025 (December 2022), and on the road, in gravel areas, and “visible in the soil at the stormwater outfalls” (January 2023).

124. In an email to Three Rivers Waterkeeper on January 6, 2023, Styropek personnel acknowledged that in mid-December 2022, Styropek “conducted routine (semi-annual) sampling of stormwater effluent (discharged via a different outfall than #002), which indicated the presence of plastic beads.”

125. Plaintiffs are not presently able to determine each date during the period from October 3, 2018 (the beginning of the statute of limitation period for this case) to the present on which the Facility has discharged stormwater through Outfall 020, Outfall 021, and Outfall 025.

126. All available evidence indicates that nurdles are transported with stormwater and discharged from Outfall 020, Outfall 021, and Outfall 025 into Raccoon Creek on each occasion that rainfall results in a stormwater system discharge. Plaintiffs therefore allege that during the period from October 3, 2018, through the present, Defendants violated the CWA’s prohibition against unpermitted discharges of pollutants at Outfall 020, Outfall 021, and Outfall 025 on each day that stormwater was discharged from each of those outfalls.

127. The violations are ongoing. Plaintiffs are unaware of any change to operations or treatment technology at the Facility sufficient to enable the Facility to stop violating the CWA prohibition against the unpermitted discharge of nurdles from Outfall 020, Outfall 021, and Outfall 025. This action addresses all such violations occurring after those described in the Notice Letter and after the filing of this Complaint.

**COUNT III:**  
**Violations of the Permit's Prohibition Against Floating Solids and Observable Deposits**

128. Paragraphs 1 through 127 are re-alleged and incorporated by reference herein.

129. Section A(1) of the Styropek Permit prohibits the Facility from discharging “floating solids, scum, sheen or substances that result in observed deposits in the receiving water.”

130. The discharge of any pollutant in ways that violate an NPDES permit requirement is prohibited by Section 301(a) of the CWA, 33 U.S.C. § 1311(a).

131. The nurdles discharged by the Facility to Raccoon Creek are “floating solids” and “substances that result in observed deposits in the receiving waters” within the meaning of Section A(1) of the Styropek Permit.

132. Since September 2022, the environmental groups, Pennsylvania DEP inspectors, Styropek staff, and a contractor retained by Styropek have all observed floating nurdles and deposits of nurdles in Raccoon Creek.

133. Participants in the Three Rivers Waterkeeper nurdle patrols have observed nurdles literally “bubbling up” to the surface of Raccoon Creek from Outfall 002, where they then float along the surface of the creek and collect on the water, in sediments, on the creek banks, and on bordering vegetation as observed deposits.

134. On each date that nurdles are discharged from the Facility through Outfall 002, the discharged nurdles constitute floating solids and contribute to observable deposits in and along Raccoon Creek. Each such discharge violates Section A(1) of the Styropek Permit, and constitutes one additional day of violation of the CWA.

135. On each date that nurdles are discharged from the Facility through Outfall 020, Outfall 021, or Outfall 025, the discharged nurdles constitute floating solids and contribute to



observable deposits in and along Raccoon Creek. Each such discharge violates Section A(1) of the Styropek Permit, and constitutes one additional day of violation of the CWA at each outfall.

136. The violations are ongoing. Plaintiffs are unaware of any changes to operations or treatment technology at the Facility sufficient to prevent nurdles from being discharged from Outfall 002, Outfall 020, Outfall 021, or Outfall 025, or to prevent such discharges from adding floating solids and observable deposits to Raccoon Creek. This action addresses all such violations occurring after those described in the Notice Letter and after the filing of this Complaint.

**COUNT IV:**  
**Violations of the Permit's Prohibition Against Discharging Substances in Harmful Amounts**

137. Paragraphs 1 through 136 are re-alleged and incorporated by reference herein.

138. Section A(3) of the Styropek Permit prohibits the Facility from discharging “substances in concentration or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life.”

139. The discharge of any pollutant in ways that violate an NPDES permit requirement is prohibited by Section 301(a) of the CWA, 33 U.S.C. § 1311(a).

140. Nurdles discharged from Outfall 002 rise through the water and float on the surface of Raccoon Creek. Nurdles discharged from Outfalls 020, 021, and 025 are discharged directly to the surface of Raccoon Creek. These nurdles are available to be ingested by fish and other aquatic life, both in Raccoon Creek and further downstream in the Ohio River.

141. Nurdles discharged from the Facility infiltrate the root systems of aquatic plants in Raccoon Creek and cover the leaves of aquatic vegetation in and around the creek. Such nurdles are available to be ingested by fish and other aquatic life, as well as birds and land-based animals.

142. Nurdles discharged from the Facility are present in observable concentrations in the bed of Raccoon Creek near Outfall 002. Such nurdles will not degrade and will remain a persistent

component of the sediment and silt until they are released to the water above, which may happen during storms, periods of high or low flow, or through physical manipulation or disturbances of the riverbed.

143. Nurdles present on the surface of Raccoon Creek and in surrounding vegetation and sediment act as “toxic sponges,” and attract to their surface any hydrophobic chemical toxins present in Raccoon Creek. The long history of heavy industrialization along Raccoon Creek makes it likely that such toxic materials are present in the water and sediments.

144. Each additional discharge of nurdles from the Facility through Outfall 002 compounds the risk to human, animal, and plant life posed by the previously released nurdles present in the water, sediments, and aquatic vegetation of Raccoon Creek and further downstream in the Ohio River. Defendants thereby violate Section A(3) of the Styropek Permit and commit one additional day of violation of the CWA each day that nurdles are discharged from Outfall 002.

145. Each additional discharge of nurdles from the Facility through Outfall 020, Outfall 021, or Outfall 025 compounds the risk to human, animal, and plant life posed by the previously released nurdles present in the water, sediments, and aquatic vegetation of Raccoon Creek and further downstream in the Ohio River. Defendants thereby violate Section A(3) of the Styropek Permit and commit one additional day of violation of the CWA each day that nurdles are discharged from each of Outfalls 020, 021, and 025.

146. The violations are ongoing. Plaintiffs are unaware of any changes to operations or treatment technology at the Facility sufficient prevent nurdles from being discharged from Outfall 002, Outfall 020, Outfall 021, and Outfall 025 in concentrations or amounts sufficient to be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life in Raccoon Creek and the Ohio River. This action addresses all such violations occurring after those described in the Notice Letter and after the filing of this Complaint.

**PLAINTIFFS' MEMBERS ARE HARMED BY DEFENDANTS' VIOLATIONS**

147. Numerous water access points and recreational areas are located along Raccoon Creek immediately upstream of the Facility. This includes a private boat launch and the Rocky Bottom Natural Area.

148. Common recreational activities on or near Raccoon Creek, and on or near the Ohio River immediately downstream from Raccoon Creek, include kayaking, canoeing, motorboating, swimming, fishing, camping, and hiking. Members of the public regularly water ski along the Ohio River within sight of the Facility. Recreational fishing boats use the area near Outfall 002, focusing their efforts on the fish that congregate there due to the nutrients and warm water discharged by the Facility.

149. Plaintiffs PennEnvironment and Three Rivers Waterkeeper have members who live, own homes, or recreate in, on, or near Raccoon Creek and the Ohio River.

150. Plaintiffs' members consider Raccoon Creek and the Ohio River to be important natural resources and aesthetically significant fixtures of the area in which they live, and they want them to be as clean, healthy, and vibrant as possible.

151. Plaintiffs' members want Raccoon Creek and the Ohio River to be subjected to as little pollution as possible, and their enjoyment of these waterways is diminished by their knowledge of the Facility's pollution of these water resources.

152. Plaintiffs have members who devote personal and professional time to improving the water quality of the Raccoon Creek and the Ohio River, and these efforts are adversely affected by Defendants' unpermitted discharges and violations of the Styropek Permit.

153. Evan Clark is a member of Three Rivers Waterkeeper and is employed as the group's Waterkeeper. He frequently navigates along the portions of Raccoon Creek and the Ohio River at issue in this action, both recreationally and for the purpose of gathering water quality data

as part of his professional efforts to improve the health of both waterways. Mr. Clark frequently swims in Raccoon Creek and the Ohio River, and often hikes and forages along both bodies of water. The presence of nurdles in Raccoon Creek and the potential for the nurdles to impact water quality and aquatic life in the Ohio River lessens his enjoyment of these activities. The nurdles discharged by Defendants disrupt his ability to rely on Raccoon Creek and the Ohio River as sources of relaxation and calm.

154. James Cato is a resident of Pittsburgh, Pennsylvania. He is a member of Three Rivers Waterkeeper and is also employed by Mountain Watershed Association as the group's Regional Organizer. Mr. Cato has assisted Evan Clark during many of the nurdle patrols discussed herein. In addition to his professional work in and around Raccoon Creek and the Ohio River, Mr. Cato hikes along the Ohio River both downstream and upstream of the Facility. He is concerned that nurdles from the Facility, and harmful substances carried on the surface of those nurdles, will be detrimental to the health and wellbeing of the fish, birds, mammals, and reptiles that he enjoys encountering on his hikes. The release of nurdles from the Facility detracts from his aesthetic enjoyment of Raccoon Creek and the Ohio River. He finds himself constantly scanning for nurdles when he is near both waterbodies, which negatively and significantly impacts his ability to relax and enjoy his time in nature.

155. Anais Peterson is a resident of Wilkinsburg, Pennsylvania. She is a member of both PennEnvironment and Three Rivers Waterkeeper. Ms. Peterson has volunteered on a nurdle patrol and has led boat tours from the Monaca boat launch down the Ohio River to Raccoon Creek. Although Ms. Peterson recreationally boats on the Ohio River upstream of Raccoon Creek, she avoids boating on the segment near Raccoon Creek because she is concerned about the impact of nurdles released from the Facility on the water quality and on surrounding wildlife. Her concerns about the impacts of pollution from the Facility on the water quality of Raccoon Creek have also

caused Ms. Peterson to forego opportunities to kayak on the creek and hike in Raccoon Creek State Park, activities that she otherwise would have undertaken.

156. Wanda Wilson is a resident of Pittsburgh, Pennsylvania, and is a member of PennEnvironment. Ms. Wilson frequently kayaks on the Ohio River and bikes on the Three Rivers Heritage Trail. She is concerned about the presence of pollutants in Raccoon Creek and the Ohio River, as she wants to recreate in and around these waterways free from worry about any negative impacts on her health and wellbeing. Ms. Wilson is also concerned about the impact of nurdles released from the Facility on aquatic life in and around Raccoon Creek, and the potential for those negative impacts to spread from the creek and impact the food chain along the Ohio River and the surrounding watershed. Her concerns about nurdle pollution dampen her enjoyment of activities in and around Raccoon Creek, the Three Rivers Heritage Trail, and the Ohio River.

157. The frequency with which these and other members of the Plaintiff groups participate in recreational activities in and around Raccoon Creek and the Ohio River, and their enjoyment of those activities, are both reduced by their knowledge of the Facility's unpermitted nurdle discharges and by the effects that the Facility's unpermitted nurdle discharges have on both waterways.

158. Plaintiffs' members are concerned that CWA violations at the Facility pose a threat to public health and to aquatic life and wildlife in and around Raccoon Creek and the Ohio River. In particular, Plaintiffs have members who avoid the water in waterbodies due to concerns of health-related impacts associated with nurdles, including their ability to transmit harmful bacteria and toxic pollutants.

159. Plaintiffs' members want to preserve the aquatic life and wildlife in, on, and near Raccoon Creek and the Ohio River to the greatest extent possible, and for this reason want as little pollution in the waterways as possible.

160. The ongoing actual and threatened harm to Plaintiffs' members would be redressed by an injunction, civil penalty, or other relief that prevents or deters further violations of the Facility's Permit and by relief that remediates the harm caused to Raccoon Creek and the Ohio River by Defendants' violations.

**RELIEF REQUESTED**

Plaintiffs request that this Court:

- a. Declare Defendants BVPV and Styropek to have violated and to be in continuing violation of the Clean Water Act and the Facility's NPDES permit by committing (i) each of the violations described above in Counts I through IV, (ii) any additional violations of the same type that occurred before the filing of this Complaint, and (iii) all additional violations of the same type that occur after the filing of this Complaint;
- b. Determine the number of days of violation committed by Defendants under each Count;
- c. Order Defendants to comply with the requirements of the Clean Water Act and the Facility's NPDES Permit that have been violated, and to refrain from further violations of the requirements at issue in this action;
- d. Order Defendants to implement measures to remedy, mitigate, or offset the harm to the environment caused by the violations alleged above;
- e. Assess an appropriate civil penalty against Defendants for each day of violation of the Clean Water Act and the Facility's NPDES Permit, as provided by 33 U.S.C. §§ 1319(d) & 1365(a) and 40 C.F.R. § 19.4, which require the Court to impose a penalty of up to a statutory maximum of \$64,618 per day of violation;

- f. Award Plaintiffs their costs of litigation (including reasonable attorney and expert witness fees), as provided by 33 U.S.C. § 1365(d); and
- g. Order such other relief as the Court deems appropriate.

Dated: December 5, 2023

ATTORNEYS FOR PLAINTIFFS:

/s/ Matthew J. Donohue

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*Pro hac vice motions to be filed*

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